OGDEN, UTAH, SATURDAY, JULY 3, 1915.

## What War Engines Has Edison Up His Sleeve?

The Wizard Of Orange Says That

His Secret Discoveries In Electricity

And Gases Would Play a Great Part

Should the United States be Invaded



A STUDY OF EDISONS FACE

If the United States must detend fiself in war and be attacked by a foreign foe, will Thomas Edison, wizard of electricity and master scientist, be able to drive back the attacking forces?

Could the wizard of West Orange, N. J., with the aid of his laboratory assistants kill the foreign hosts with deadly gases or explode their ammunition by electricity? What unknown invention has he up his

In a recent interview Edison indicated that were the United States attacked he would devote his attention to our country's defense and would make war more deadly than it is at present.

"I can help make war worse than it is at present," the great inventor

recently said. How would Thomas Edison, the master mind of the century, the world's greatest inventor, make war more deadly than it is at present with poison gases killing thousands in the trenches in Europe? This he refuses to discuss but the answer is plain; by inventing or preparing more poisonous gases than those used at present? Edison says that the two great factors that will count in future wars are deadly gases and

## FATAL TO SCIENTISTS.

electricity.

Hydrocyanic acid has killed more scientists than any other agent. But one whiff of it is necessary to kill-Often professors in closed rooms have unmindfully allowed the gases to accumulate and have been found dead. Several years ago a physician in Illinois, determined to kill himself, decided on hydrocyanic acid and to leave a last contribution to science, arranged so as to mark on a piece of paper a black dash for every second he lived after inhaling the gas. It is said that only ten marks were found on the paper.

Edison may be able to invent gases more deadly even than hydrocyanic

"Of course science can find many more effective ways of destroying life than by artillery and high explosives. The possibilities of chemistry and electricity have hardly yet been touched on in modern warfare. They can do a lot better," Edison recently said. "I could invent something more deadly than the gas bombs but I would rather make the world a better place to live in. Speaking of the possiblities of war-

ring nations using deadly bacilli the inventor said: "They haven't got to that yet, thank God. There must be relics of civilization still left in the very worst of them. Yet the rules of the game don't count for much these days. It's gotting to be just a reversion to an animal state. Things are bad enough as it is. BAD ENOUGH

NOW. "The use of gases will be carried on to a much greater extent. Every time a new thing comes along the inventors take hold of it and improve it, but chemistry is playing a greater part in the present war

than electricity. "I do not think electricity could be used to prevent a torpedo reaching its mark. The torpedo moves in the water and would have to be especially so that it might be exploded before that ploded before it struck a vessel, but the enemy is not going to construct such a torpedo. A torpedo's course may be controlled by the vessel that fires it as has already been proved. but the ship it strikes is powerless to half its and take to halt its aproach. A ship might so fitted that it would not sink after being hit. I should not be surprised if a big change comes

about in ship construction, but we may be sure some way will be found to offset the torpedo. The submarine has been the greatest offensive weapon of this war and now the advent of the poisonous gases is anoth-

Speaking of the present war

Edison said: "As a lay student of the situation it seems to me that the comparatively untrained Englishman has had an advantage from the start just because he has been untrained. This is a striking thing, with a big lesson in it, for the English soldier, believe, may be regarded upon the whole, as the physical inferior of the German soldier. Too much military training not only availed Germany nothing, but actually proved to be

AMERICAN

"In the unavoidable interpretation

ties was the 'Spirit of '76' made up.

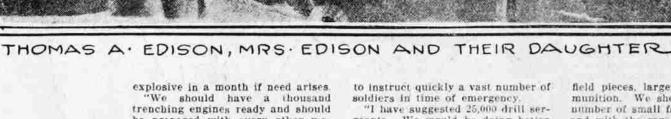
of the European war have proved

beyond the shadow of a doubt the

I believe that the developments

It still is latent here.





"But I do not in the least agree with the advocates of a great standing army or even of a great military reserve. I believe that, all other details having been looked after, we shall be quite safe if we maintain, as now is authorized, an army of,

which to meet the first shock of an emergency. I believe that we could confidently count on volunteers to

"We should organize our state militia upon really efficient lines. It is my belief that it should be under national, not state, control The men who train it, whether their selection be left with the states or be the business of the national government, should be chosen with as much care as that with which I select men for important tasks in my laboratory."

od quickly would discover for us. in addition to our standing army, at least 25,000 men especially equipped by natural ability achieve military efficiency, and these would be drill sergeants, competent

to instruct quickly a vast number of soldiers in time of emergency. "I have suggested 25,000 drill sergeants. We would be doing better

THOMAS A

if we had 40,000. "What we want is a small army trained to a big knowledge and trained to teach it as well as to exercise it. Raw material for training is at hand. We have many millions of potential fighting men.

We never must become a military nation in the old sense of the term, but I believe it possible that we may become one of the greatest the military nations without burdening ourselves with any comparatively great, permanent military expense. Modern warfare is more a matter of machines than of men Most of the machines are simple matters, if we compare them to the

machines of industry. "If we had machinery at hand with which to equip a million men we could find the million men upon 24 hours' notice. There is practically no military sentiment in the United States, nor ever has been, but we have proved ourselves to be among the world's most powerful fighters whenever we have had to fight.

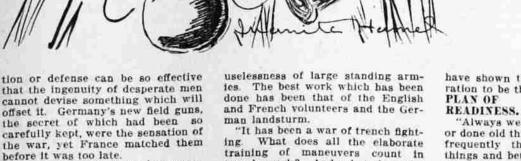
RAILROAD "What is true of our necessities for machinery is true, also, of our

necessities for a great supply of

field pieces, large cannon and ammunition. We should have a large number of small factories, equipped and with the raw material at hand in quantities, but so stored as to avoid deterioration, ready to make the latest and most powerful explosives. We should have arsenals with an enormous capacity for the manufacture of large guns, and their facilities should be kept strictly up to date; we should have accurate knowledge of all shops and factories equipped to manufacture tools for defense, aeroplanes and all manner of accourrements. We should have contracts with the owners permitting the commandeering of all such shops in case of war and at a given price for their use, and this should be true of all instrumentalities needed in case of war

and instautly operated. "We need not keep men employed in these shops out of more product tive work in times of peace in order that they may be ready to give servive if a war should come.

"We should carefully consider transportation in its changed conditions. The efficiency of the railroad is not, now, a matter of such vital moment for us as a means of moving troops, although, of course, the railroads must remain for many years the chief means by which heavy artillery and supplies will be moved.



trench work? And what does the

which one must place upon these facts is another reassurance for fact that it counts little mean? Certainly that the world has wasted a vast amount of money in unneces-America. We are as clever at mesary military drill and useless fortichanics, whether they be those of fications. I cannot understand the war or those of peace, as any people situation in any other way. of the world. We gave the world "I do not wish any of these statethe iron-clad war vessel as the rements to lead readers to the belief sult of one emergency. We gave the that I would have my country negworld the submarine. Our Wright lect to realize the necessity of being brothers perfected the aeroplane.

able to defend itself. I merely wish "If any foreign power should serito call attention to the lessons ously consider an attack upon this country a hundred men of special which the European war seems to me to teach. training quickly would be at work "I consider it a reasonable certainhere upon new means of repelling ty that some day we shall have a war; and I consider it a probability the invaders. I would be at it myself. There would be no lack of the spirit of determination or the spirit of self-sacrifice. Of these two quali-

that when the day comes we shall find ourselves unprepared to meet it. I believe it to be the duty of every American patriot to do what be can to see that this does not occur, but I do not believe that the events of recent months in Europe

have shown their method of preparation to be the right one.

"Always we have done new things or done old things in a new way, and frequently they have been better. things and better ways than Europe has developed. Why should we follow her lead in a military course which has proved to be disastrous

"The European plan of readiness for war really has provoked war. We should evolve a plan of readiness for war which would not do that, but which none the less would worthily protect us.

"We should not take our men from industry and overtrain them; but we should have 2,000,000 rifles ready, in perfect order, even greased, with armories equipped with the very best machinery to begin, upon short notice, in case the work should be required, the manufacture of a hundred thousand new firearms every day.

"We should not only have upon hand a large surplus stock of the best ammunition, but we should have government factories equipped to produce a thousand tons of high

be prepared with every other mechanical device for rapid defense. Of these things I am certain.

say, 100,000 men. With as many men as that with

meet what might come later.

"The development of such a meth-